National Institutes of Health
Warren Grant Magnuson Clinical Center
Nursing Department

Standard of Practice: Pressure Ulcer Prevention for the "At Risk" Patient

I. Assessment:

1. Perform skin assessment upon admission for the "at risk" patient.
2. Calculate Braden Scale (**PDF file**) for predicting pressure score risk upon admission and PRN for change of condition.

II. Interventions: By Level of Risk According to Braden Scale Score.

A. Braden Scale Score >18 (not at risk)

Encourage continued ambulation and mobility

B. Braden Scale Score 15-18 (at risk)

1. Encourage ambulation and mobility as tolerated. Reposition the patient every two hours to relieve pressure on any part of the body. If patient unable or needs assistance in turning, place them on a turning and repositioning schedule.
2. Reduce and/or relieve shear and friction injury.
   -Keep the head of bed at 30 degree or lowest elevation consistent with medical conditions and other restrictions.
   -Use trapeze, turning sheets, lift, elbow/knee protectors, and transfer boards to facilitate dependent/independent patient movement.
3. Cleanse skin with warm water and mild soap or no-rinse cleanser. Moisturize skin daily and PRN with lotion to keep skin supple. Avoid lotion between toes
4. Do not rub/massage reddened areas or Stage 1 pressure ulcers. Massage may cause laceration and tearing of underlying tissue
5. For patients who are chair-bound initiate Physical Therapy consult for appropriate pressure reduction support surface.
6. Manage urinary and fecal incontinence with cloth incontinence pads or Driflow underpads. Avoid diapers and layering of chux. Clean incontinent episodes immediately to protect skin from breakdown. Use plain water or no-rinse cleanser such as Sage Perineal Washcloth. Offer bedpan or use of commode at scheduled times for bedridden patients.
7. Provide handout "Preventing Pressure Ulcers: A Patient's Guide" http://www2.cc.nih.gov/patiented/summary.asp?ID=3416 to patient and family.

C. Braden Scale Score 13-14 (Moderate Risk) Include "At Risk" interventions and in addition:

1. Notify Wound Nurse for assistance in bed selection and in individual plan of care.
2. Place pillows under legs from mid calf to ankle to "float" heels off bed. Place pillows between knees when patient in side lying position. Keep heels elevated at all times.
3. Request Physical Therapist consult for improving/maintaining mobility and activity status.
4. If air mattress in use, insure proper inflation by hand check every shift.
5. Request Nutrition consult for dietary and supplement recommendations.
6. Monitor lab values. ex: HCT, HGB, WBC, albumin, coags and total protein levels.
7. Monitor weight, intake/output PRN or as ordered by physician.

D. Braden Scale Score 10-12 (High Risk) Include all Previous Interventions and in addition:

1. Evaluate the skin after each turn interval; if there is non-blanchable erythema, increase frequency of turning as tolerated by patient.
2. Provide pressure reduction support surfaces to bed and chair.(ex foam and gel chair cushions)
3. Continue to manage moisture related breakdown sources such as fecal incontinence, urinary incontinence, perspiration and wound drainage.

III. Documentation

Document the following in MIS or on approved NIH forms

1. Braden Scale Score "Hygiene/Skin" MIS screen
2. Assessments, interventions and patient response
3. Patient/family teaching

(PDF file)

BRADEN SCALE FOR PREDICTING PRESSURE SORE RISK

Patient's Name_____ Evaluator's Name_____ Date of Assessment

SENSORY PERCEPTION	**1. Completely limited:** Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation, OR limited ability to feel pain over most of body surface.	**2.Very Limited:** Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness, OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body.	**3.Slightly Limited:** Responds to verbal commands but cannot always communicate discomfort or need to be turned OR has some sensory impairment which limits ability to feel pain In 1 or 2 extremities	**4.No Impairment:** Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.
MOISTURE Degree to which skin is exposed To moisture.	**1.Completely Moist:** Skin is kept moist almost constantly by perspiration urine, etc. Dampness is detected every time patient Is moved or turned.	**2.Moist:** Skin is often but not always moist. Linen must be changed at least once a shift.	**3.Occasionally Moist;** Skin is occasionally moist, requiring an extra linen change approximately once a day.	**4.Rarely Moist:** Skin is usually dry; linen requires changing only at routine intervals.
ACTIVITY Degree of physical activity	**1.Bedfast:** Confined to bed	**2.Chairfast:** Ability to walk severely limited or nonexistent. cannot bear own weight and/or must be assisted into chair or wheelchair.	**3.Walks Occasionally:** Walks occasionally during day for very short distances, with or without assistance spends majority of each shift in bed or chair.	**4.Walks Frequently:** Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.
MOBILITY Ability to change and control Body position	**1.Completely Immobile:** Does not make even slight changes in body or extremity position without assistance.	**2.Very Limited:** Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	**3.Slightly Limited:** Makes frequent though slight changes in body or extremity position independently.	**4.No Limitations:** Makes major and frequent changes in position without assistance.
NUTRITION Usual food intake pattern	**1.Very Poor:** Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement, OR is NPO and/or maintained on clear liquids or IV's for more than 5 days.	**2.Probably Inadequate:** Rarely eats a complete meal and generally eats only 1/2 of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement OR receives less than optimum amount of liquid diet or tube feeding.	**3.Adequate:** Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasion-ally will refuse a meal, but will Usually take a supplement if offered, OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs	**4.Excellent:** Eats most of every meal. Never refuses a meal. Usually eats a total or 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not requires supplementation.
FRICTION AND SHEAR	**1.Problem:** Requires moderate to maximum Assistance in moving. Complete Lifting without sliding against Sheets is impossible. Frequently Slides down in bed or chair, Requiring frequent repositioning With maximum assistance. Spasticity, Contractures, or agitation leads to Almost constant friction.	**2.Potential Problem:** Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints, or bed most of the time but occasionally slides down.	**3.Apparent Problem:** Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.	

Selected References:

1. National Press Ulcer Advisory Panel. September 1995. NPUAP Statement on Reverse Staging of Pressure Ulcers. (Online) http://www.npuap.org/positn2.html

2. Bergstrom N, Bennett MA, Carlson CE, et al. Treatment of Pressure Ulcers. Clinical Practice Guidelines, No.15. Rockville, MD: U.S. Department of Health & Human Services. Public Health Service Agency for Health Care Policy and Research. AHCPR Publication No.95-0652. December 1994.
3. Maklebost J. Sieggreen, M: Pressure Ulcers: Guidelines for Prevention and Mangagement, 3rd Ed, Pennsylvania, 2000, Springhouse.
4. Bergstrom, N. Allman, RM, Carlson CE, et al. Pressure Ulcers in Adults: Prediction and Prevention Clinical Practice Guidelines No.3. AHCPR Publication No.02-0047. Rockville, MD: Agency for Healthcare Policy and Research, Public Health Service, U.S. Department of Health & Human Services. May 1992.
5. Bryant, R: Acute & Chronic Wounds; Nursing Management, 2nd Edition, t. Louis, 2000 Mosby.
6. Folkedahl, B., Frantz, R., Goode C.: Prevention of Pressure Ulcers Research – Based Protocol. The University of Iowa Gerontological Nursing Interventions Research Center, Research Development and Dissemination Core, November 1997, Iowa City, Iowa.
7. Bergstrom, N., Braden, B.J., Laguzza, A., Holman, V., (1987). The Braden Scale for predicting pressure sore risk. Nursing Research, 36(4) 205-210.
8. Fairchild-Heberer, P., Jones, J., Nissen, C., Swindell, P.: Smith & Nephew – A Protocol Sampler. 1998 Largo, FL.

V. Additional Information

- **Braden Scale** is composed of six subscales that conceptually reflect degrees of sensory perception, skin moisture, physical activity, nutritional intake, friction and shear, and ability to change and control body position. It is utilized to determine level of risk for pressure ulcer and predict which patients are likeliest to develop pressure ulcers. A hospitalized adult patient with a score of $\leq$ 16 is considered at risk for skin breakdown.

- **Pressure Ulcers** are localized areas of tissue necrosis that develop when soft tissue is compressed between a bony prominence and surface for a prolonged period of time.

- **Pressure Ulcer Staging**
  Stage I: Nonblanchable erythema of intact skin that does not resolve within thirty minutes of pressure relief. Epidermis remains intact. Reversible with intervention.
  Stage II: Partial thickness skin loss involving epidermis, dermis or both. The ulcer is superficial and presents clinically as an abrasion, blister, or shallow crater. Wound base is moist, pink, and painful; free of necrotic tissue.
  Stage III: Full-thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia. The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue.
  Stage IV: Full-thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures (e.g., tendon, joint capsule). Undermining and sinus tracts also may be associated with Stage IV.

- If the wound involves eschar, staging cannot be confirmed until eschar has sloughed or the wound has been debrided.
- Reverse staging should never be used to describe the healing of a pressure ulcer. Healing of pressure ulcers should be documented by objective parameters such as; color, size, skin temperature, depth, and amount of necrotic tissue, amount of exudate, presence of granulation tissue.
- For patients with darkly pigmented skin, assess for erythema and/or inflammation with localized changes in skin temperature.

References

- **Online staff and patient educational resources**
  http://www2.cc.nih.gov/patiented/summary.asp?ID=3416

Approved:

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Clare E. Hastings, RN, Ph.D.
Chief, Nursing & Patient Care Services

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